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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,639	11/29/2001	Yan Hui	TI-33002	7477
23494	7590	05/03/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			PERUNGAVOOR, VENKATANARAY	
		ART UNIT		PAPER NUMBER
		2132		

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/997,639	HUI, YAN
	Examiner	Art Unit
	Venkatanarayanan Perungavoor	2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 November 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-6 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 November 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Specifications

1. On Page 1 Line 22, the Applicant mentions “represntation”, the examiner believes “representation” was intended. Appropriate correction required.

2. On Page 2 Line 11, the Applicant mentions “AGC performance”, the examiner suggests an definition or expansion of the acronym before use. Appropriate correction required.

3. On Page 6 Line 4, the Applicant mentions “requirments”, the examiner believes “requirements” was intended. Appropriate correction required.

4. On Page 6 Line 6, the Applicant mentions “normolization”, the examiner believes “normalization” was intended. Appropriate correction required.

5. On Page 8 Line 5, the Applicant mentions “genrated”, the examiner believes “generated” was intended. Appropriate correction required.

6. On Page 8 Line 7, the Applicant mentions “revere”, the examiner believes “reverse” was intended. Appropriate correction required.

7. On Page 10 Lines 11, 12, 20 & Page 11 Line 1, the Applicant mentions "log2", the examiner suggests the use of "lg" as it is commonly understood in the art to mean logarithm of base 2.

Claim Objections

8. Claim 6 is objected to as on Page 17 Line 5 the applicant mentions "descrambler", the examiner believes "descrambler" was intended.
Appropriate correction required.
9. Claim 3 and Claim 4 the applicant mentions "log2", the examiner suggest the use of "lg" as it is commonly understood in the art to mean logarithm of base 2.

Claim Rejections – 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
11. Claim1-6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicant does not disclose what is the input and what is the output. And further some clarification about what the letters means (A, B, S, D₁, Q, I, s_i) is suggested by the examiner.

Claim Rejection- 35 USC § 101

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claim 1-4 are rejected under 35 U.S.C. 101 because it discloses an abstract idea that is not tied to a technological art.

Claim Rejections – 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claim 1-6 rejected under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent 6157679 to Johnson.

16. The scrambling of signals through an method of mathematical constellation to the extent the claim defines a tangible invention, the mathematical steps disclosed in Johnson meet the recitation of the claims, see Col. 4 Line 36-61 & Fig. 2 & Fig. 3 & Abstract.

Conclusion

17. The following patents are cited to further show the state of art in general

U.S. Patent 6,005,888 to Barron

U.S. Patent 5,828,694 to Schipper

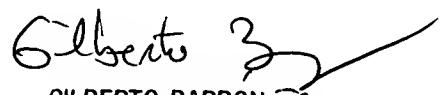
18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Venkatanarayanan Perungavoor whose telephone number is 571-272-7213. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP Venkatanarayanan Perungavoor
Examiner
Art Unit 2132

VP
4/27/2005


GILBERTO BARRON Jr.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100